

COMPOSITE MATERIAL PROGRESSING CAVITY STATORS**ABSTRACT OF THE DISCLOSURE**

A progressing cavity stator is provided. The progressing cavity stator includes a fiber reinforced composite component providing an internal helical cavity having at least one helical groove and an elastomeric liner disposed on an internal surface of the fiber reinforced composite component. In various exemplary embodiments, the fiber reinforced composite component includes a plurality of fibers disposed in a matrix material, the plurality of fibers being disposed such that distinct portions thereof follow correspondingly distinct directions. Exemplary embodiments of this invention may advantageously exhibit a prolonged service life in downhole applications as compared to conventional progressing cavity stators. A replaceable progressing cavity insert for a stator is also provided. Methods for fabricating progressing cavity stators and progressing cavity inserts are also provided.